

7

25

An
Inaugural Dissertation
on the
Stomach
its
Functions, Diseases, and Sympathies

Robt. Egglefield Griffith - Penna.

admitted March 6th 1820.

R. E. Griffith
Alms house

John
Barnes
1811

1811

Rev. E. J. [illegible]
[illegible] 1811

611

The Stomach its Functions, Diseases & Sympathies

One of the great distinctions between Organic and Inorganic matter is the provision of an Alimentary system, the increase in bulk of inorganic matter is owing to external causes acting under the known laws of Chemical or Mechanical aggregation and accretion, but in Organic matter very different is the case, here it depends on an internal mechanism of which the we know the structure the laws that govern it are still to be developed —

The Alimentary system appears to be the great and primary source of this internal mechanism or as Bichat has very appropriately termed it "Internal Life" from it is derived all the sustenance and vigor of the rest of the body, it may be termed the primary link of organization and life and to be an absolute requisite of organic being —

We find as we descend in the scale

of creation this alimentary organisation becomes gradually less perfect, and less complex —

In the lowest order of organised life with which we are acquainted, the Vegetable, it is extremely simple consisting merely of a congeries of absorbing canals, and these so very minute that by some their existence has been doubted, that these vessels by some power inherent in the plant fluids are capable of being propelled and of passing to every part; when either by assimilation they increase the growth of the vegetable or are thrown off by processes to us unknown —

Next in the link of animated nature at present known to us, we find the numerous and diversified orders of Polyps and Zoophytes in these the Alimentary system becomes more distinct and perfect, but still it merely consists of a membranous bag or Stomach, constituting however the principal bulk of the animal, this bag has only one orifice consequently the

Food is taken in, and excrementitious matter discharged by the same passage, none of the rest of the Chylopoietic Viscera are distinguishable, when however arrived at the clasp Viscera, we find the Animal more capable of locomotion and the digestive organs more complex, here this membranous bag is considerably lengthened and convoluted, and has two orifices - the food of these classes of animals must of necessity be very simple and as in plants require little more than mere assimilation -

In the finny tribes many of the digestive organs are to be met with, they possessing in addition to the stomach and intestines a Pancreas, Spleen, and Liver.

After arriving among the Reptilia there is apparently no addition to the number of the Chylopoietic Viscera, but their influence over the system becomes gradually greater, till we arrive at man where we find them exerting the greatest command over the system.

every part even the most remote sympathizing with them, they do not however in size bear the same proportion to the body that they did in the lower orders of creation - man being a sentient and discriminating creature is able to select his food and capable of choosing the most nutritious, therefore so large a space is not requisite for its digestion, still however what it loses in bulk, it gains in sensibility importance and power -

The Digestive are among the first organs that are formed in the Foetus in utero, they constitute one of the most vital departments of the human frame, of these the Stomach confessedly most strongly attracts our attention, here the first great changes take place in the important office of digestion, it is the most susceptible of being acted on by apparently trifling causes and when thus affected powerfully influences the rest of the system -

a diminution of its energy or any derangement in its functions is immediately felt throughout the whole human frame. —

In treating of this important and vital viscus I shall consider its Functions, Diseases and Sympthoms as operating on the other parts of the human body.

Functions of the Stomach

The great and important office that the Stomach performs is that of Digestion a latter part of the process being Chymification.

How this change of food takes place has long been a subject of dispute among Physiologists some contending that it resulted from a Chemical action, some from mechanical power and others from a vital agency inherent in the part, the last of these appears to me the most plausible and approaching nearest the truth, still however that a



chemical action to a certain extent does exist cannot be denied for we find that when in a state of disease, and the vital power is weakened that a chemical action takes place in the food received into the stomach; the gastric liquor also exerts some chemical agency on the aliment when in this tissue, but it requires the union of the vital principle to accomplish this, as out of the body or removed from the sphere of vital action no effect is produced on the solution of elementary matter is to its influence.

Some of the advocates for the purely chemical doctrine admit the fact of the stomach having been found after death to have been corroded by the solvent power of the gastric liquor, but even admitting this fact we have no evidence that any substance resembling Chyme was formed, to do this the presence of the vital principle appears to absolutely make for itself, one strong objection to this chemical or solvent power of the gastric fluid is the fact



of the existence of worms in the stomach, was this found so universal a solvent, we should suppose that they would be effected by it, but such is not the case. — The sudden change that aliment when goes when received into a healthy stomach it is alleged must depend on a chemical action (but that in this the vital power has considerable influence), I feel convinced, we do not find as great and sudden changes produced out of the body when the gastric fluid is poured on any aliment —

This gastric liquor is derived from glands situated in the mucous membrane of the stomach, we know but little respecting this fluid except its effects although many attempts have been made to ascertain its constituent parts by Spallanzani, Goussier, and others it is highly probable the liquor they obtained was by no means pure but mixed with saliva and other foreign matter —

During the process of digestion there is an increase of heat in the stomach, and it is



abstracted from the rest of the system! and hence
 causes that shivering that is frequent after a meal.
 there is a greater quantity of blood thrown
 through the arteries of this organ: whilst the chymus-
 -ifying process is going on than at other times this
 may be one source of the increase of heat.

During this process there is also a
 greater motion of the stomach appearing to depend
 on two causes, one derived from its pressing more
 strongly against the Diaphragm and is thus acted
 on by the organs of respiration, according to Dr L
 Storr there is likewise a considerable action of
 this muscle itself. he observes that when food is
 received into the stomach its muscular fibres contract
 and by this means divide it into unequal parts
 the larger at the greater curvature, this he
 denominates the Cardiac and the lesser the
 Pyloric, by this separation the food is detained
 in the greater division till it has been acted
 on by the juices secreted in this cavity, after



being thus changed, the contraction ceases and the food passes into the lactation. —

We have not yet sufficient evidence that this process takes place judging from the morbidness of the numerous fibres of the stomach we should suppose that they were incapable of so great an action —

The whole system participates in the important process that is carrying on and commences all its powers to this point, a slight chill is often felt, the pulse acquires quickness and a species of fever is excited. This is particularly observable in delicate persons, and in those in a state of dis-ease it is far more distinct. how much is a paroxysm of fever augmented by the stirring the stomach with food.

The period of time employed in this process is various, depending on the state of the system and nature of the food, in a healthy state however it is supposed to occupy about

After the aliment taken into the stomach is thus changed into an homogeneous body it passes



out of the pyloric orifice into the duodenum, where it undergoes still more changes, the consideration of which are however irrelevant to the subject of this essay -

In one respect the stomach requires the assistance of a mechanical power all substances must be reduced, from a solid form by mastication or otherwise, before they are presented to it, without this it is excited to a too powerful and injurious exertion of power is expended in this excess of labour, and some of weight follow and what is eaten, altho' well digested does not allay the craving sensation of hunger as completely -



Diseases of the Stomach

In each of these I shall list briefly such a few
varieties of them as are best known for beyond the limits
of a page of this character -

Diseases of Function

Dyspepsia: quickly arrests our attention as the most
prominent of these - the chief symptoms are, nausea
after taking food, vomiting, great depression of spirits
the appetite often depressed soliciting the most nutri-
tious articles, as chalk, &c. &c. but from the intimate
sympathy of the stomach with the rest of the system
this disease appears in many forms as the fabled
Proetus -

Causes are various any thing that weakens
the tone of the Stomach either directly or by sympathy.

Care is often profuse, and in
so great a degree depends on particular habits of
the body that it rarely any settled plan of treatment
suits, although by times - Purgation followed by Tonics



of which the Bitter and Chalybeate seem to answer best, with a great attention to diet and exercise in running etc.

Cardialgia: this seems to arise from a accumulation of acid matter that produces the disagreeable symptoms attendant on the disease.

Our remedies are Emetics the Alkalies, and antacids medicines.

Gastrodynia This term appears to signify a swelling or a painful distension of the stomach or the cold affections extending either to this part or even to the surface of the body - Our remedies are the antispasmodics, emetics diluting the stomach with warm water, the application of warmth externally to the Epigastric region, Sinapisms and Venesection, this last remedy in the cases I have witnessed, was not as efficacious as the nature of the disease would a priori have indicated it never reduced the violence of the spasms until it was carried to very copious extent.



Pyrosis. This affords to the patient a peculiar form of Cardalgia, in which vomiting of the vitiated secretion takes place, it is said to occur most frequently in those that live on a low and pernicious diet. The remedies are much the same as for Cardalgia. Opium has been highly recommended by Boerhaave. The oil of Amber is also said to be very efficacious. Nausea. This depends on a variety of causes. The great indication of cure is to quench the irritability of the stomach. Lime water and milk, Effervescent draughts the aromatic tincture warm spicing puddings to the Epigastrium, Opium pills that have been made for a long time and a variety of other modes have all been recommended to remove this distressing complaint.

When it depends on indigestible matter evacuating the contents of the stomach is the most beneficial plan of treatment.



2. Diseases of Organisation

of these I shall glance at but two viz, Gastritis and
Mammatosis —

Gastritis. There are two species of this disease the
Phlegmonous and Symplicularis, the last rarely comes on
except in the last stages of a malignant disease.
Causes. the phlegmonous is excited by all the ordinary
causes of Inflammation, particularly cold, acrid sub-
stances taken into the stomach, by blows on the Epigas-
trum — Symptoms sensations of acute pain about
the Umbilicus cordis, sourness to the touch, tension of
the abdomen prostration of strength, pulse small, hard,
chorded; it runs its course very rapidly, and towards
the end of the complaint these symptoms are greatly
aggravated. Cure Our great reliance is on copious
Venesections, in this disease very little regard should be
paid to the apparent state of pulse, large blisters over
the Epigastrium. Much farther we are now to be very effi-
cacious, keeping the bowels free by purgative expositions



is of the greatest importance, in the latter stage of the disease the Spirit of Turpentine in large doses is very efficacious —

Hæmatemesis. this disease is often confounded with hæmoptoe, however by attending the difference is very distinguishable — in Hæmoptoe the blood is discharged by ~~vomiting~~ ^{coughing} in Hæmatemesis by the action of vomiting, in the latter also the blood is dark and grumous and mixed with the contents of the stomach, in the former it is frothy Causes. are various as blows on the Epigastrium, hard drinking, by the violent action of Emetics, the sudden applications of cold, it also occurs by metastasis from another part as the Uterus or lungs.

Treatment. depends in a great measure on the state of the system if the pulse is excited venesection is especially called for. Sugar of Lead, Muriate of soda and Alum in solution have all been advocated, the Tincture of the Muriate of Iron has also excited some attention in these cases. If it depends on the suffusion



of the Catamenia or any of the other customary discharges of the body, restoring these will be the best means of regaining a healthy state of the stomach.

Sympathies of the Stomach

The Sympathies of this organ are confessedly more numerous than those of any other part of the Animal structure: this is scarcely any part of the human frame that does not feel its widely pervading influence.

I shall consider them under the heads of sympathy with the Skin, Brain, Lungs and lastly with the system generally, all these are no doubt reciprocal, but it is particularly worthy of observation that a sympathetic action of these parts derived from the stomach is stronger more direct and instantaneous than that commencing in these parts and thence affecting the stomach.

1. With the Skin. Between these two parts of the animal economy there exists the strongest sympathy, we find Gustation produced by cold suddenly applied to the skin and in the cure of this disease how much do we



depend on an impression made on the external surface of the body, a moderate degree of cold is a stimulant to the stomach and excites appetite, heat on the contrary appears to relax the tone of this viscus in the same degree as it does the surface of the body. This is one great reason of the prevalence of gastric affections during the summer season, perhaps even more so than any improper aliment taken into the stomach.

Almost if not all the cutaneous affections can be cured by an impression made on the Alimentary Canal in some we are obliged sedulously to attend to this part of the system, indeed the origin of many appears to be some disorder of the stomach. In all the diseased affections of this sensible organ the exerting a counter irritation on the skin by means of baths rubefacients and diaphoretics is admitted by most practitioners to be one of our chief means of cure, that these diseases are brought on as often by sudden changes of atmospheric temperature, as by



Causes acting in a direct manner on the stomach must be the observations of all that have seen much of these complaints. If therefore the digestive organs can be thus sympathetically affected by causes acting on the cutaneous system, the great utility of placing reliance on remedies addressed particularly to the skin must be obvious.

2. With the Brain. with this important part of the human frame the stomach exists a very strong reciprocal sympathy -

From severe blows on the head nausea and vomiting often are excited, singular writers detail innumerable instances in which these have occurred, they not only produce immediate effects on the stomach, but severe chronic affections of that organ have supervened. In Hydrocephalus a severe affection of the stomach almost invariably takes place.

Dissections have proved that in almost every case of Mania (in which the Viscera were examined) the digestive organs were very visibly affected - In mania à Potu we have the fact of the derangement of the



of the stomach producing a violent effect on the brain. strongly exemplified and by adorning our remedies to the stomach [the list of which appear to be omitted] we are enabled to conquer the disease of the brain. In this disease the stomach in all the cases that I have seen has been loaded with a collection of foul matter.

I would not wish to have it supposed that I consider a diseased state of the Chyliferous organs to be invariably or even the most general cause of Insanity, but that it is oftentimes so and that remedies particularly adjoined to that part of the body have great effects in curing or at least materially palliating the disease will scarcely be denied.

Hypochondriasis sometimes arises from a diseased state of the alimentary system, in this disease the focal evacuations strongly denote a morbid action existing in the stomach and intestines, we will in some instances find that the attacks of Mania are preceded by pain about the praecordia or some other indication of a diseased state of the stomach, as a foul tongue, one



generally coated with a viscid phlegm.

Aphroresy is I suspect often caused by some derangement of the stomach, it is rarely that we cannot trace it to some debauch in eating or drinking, it is a disease that attacks drunkards more frequently than any other class of men in them we know that the stomach is invariably greatly disordered, it is on this account that Emetics have proved so useful in this disease -

Those habitual headaches to which many are so liable are more successfully treated by Emetics than by any other plan, indicating their origin to the stomach.

3. With the Lungs. the sympathies of these organs with the stomach appear less distinctly marked than those of which I have already spoken, but still there exists a considerable sympathy between them -

We have cases on record in which a disorder of the digestive organs has produced a species of Pthisis, this according to Dr Wilson Phillips most generally attacks drunkards and those that have long been subject to Dyspepsia, he observes that there are two species of the



diseases, one in which the stomach is primarily affected in the other the Lungs, the former he remarks occurs most frequently, as the tendency of a disease of the digestive organs to spread to the Lungs, is greater than from the latter to the former.

In the works of Abernethy are many cases of patients that died of apparently nothing but a Pulmonary disease in whom on dissection the Chyliferous Vessels were far more affected than the Lungs.

4. With the Heart. The actions of this organ also are affected by sympathy with the stomach, we find on dissection that oftentimes patients, that for years have complained of Palpitation and other irregular motions of the heart present no mark of disease in this part but that their stomach is morbidly diseased.

I saw this exemplified in the case of a Mrs Cole who died in the Almshouse she for many years had labored under palpitations of the heart and other distressing symptoms of that part after her death, which was caused by a Cholera Morbus we opened her and



were astonished to find no morbid appearance in the heart, nor indeed in the stomach or intestines, still her case I feel convinced arose from a disordered state of the functions of her stomach, as after taking any thing into that viscus that in the least disordered it an attack of palpitation was brought on, her case presents an interesting instance of a disease of function assuming the type of one of organisation, and existing for so long a time; 4 or 5 years; independently of any organic disease -

Various diseases attributed by writers to a diseased state of the Stomach

This subject would lead me into so much longer a description than the nature of this essay would allow that I shall mention but few in addition to those alluded to in the foregoing page.

Neuroses the whole of this class of most distressing and perplexing diseases have been said by many



authors to originate from a disorder of the stomach.
Fevers In the greater part of the febrile affections
 the stomach appears to be the first part attacked
 hence the importance of our early attention to
 removing the exciting cause by emetics or purgatives.

Diabetes this disease has also been attributed
 by many to a diseased state of the stomach, they
 state that remedies addressed particularly to it
 will cure the disease of the urinary organs.

Buboes In the description of buboes; marking
 a forcible and repeated impression on the sto-
 mach by means of emetics, has proved highly
 beneficial, the same may said with regard
 to *Scorbia humoralis*.

Many diseases of the eye have been attributed
 to a disorder of the alimentary system. Richter
 especially advocates that doctrine he attended par-
 ticularly to, and directed his remedies to that
 part of the body with great success.

Mr Dawson of London found emetics of great

utility in the Egyptian Ophthalmia, a corroboration of this practice is to be met with in P. Wm Adams.

But enough has been said to prove the extreme importance of attending to the Stomach in determining our mode of practice, that the stomach is an organ possessed of great sensibility and sympathy, and when performing its functions whether natural or diseased, to bring others into its sphere of action and to render them more or less dependant on it.

In the foregoing pages I have endeavored to express the strong sense I entertain of the importance of the stomach, that this is very imperfectly done I am well aware, that many errors exist I am afraid but even as such I hope that they may be viewed with candor and indulgence—

